ANNEX 3

GLOSSARY

Acute toxicity	Adverse effects produced by single exposure to substance
Aspiration hazard	Any material which, if aspirated into the respiratory tract during swallowing or vomiting of the material, will cause respiratory tract (usually lung) injury because of its severe irritancy or corrosivity, or cause a granulomatous reaction because of its insolubility and persistence in the respiratory tract.
Bioaccumulation	General term describing a process by which chemicals are taken up by aquatic organisms directly from water as well as through exposure through other routes, such as consumption of food and sediment containing the chemicals.
Biochemical (or biological oxygen demand (BOD)	A measure of the rate at which molecular oxygen is consumed by micro-organisms during oxidation of organic matter. The standard test is the 5-day BOD test, in which the amount of dissolved oxygen required for oxidation over a 5-day period is measured. The results are measured in mg of oxygen/l (mg/l).
Bioconcentration	A process by which there is a net accumulation of a chemical directly from water into aquatic organisms resulting from simultaneous uptake (e.g., by gill or epithelial tissue) and elimination.
Bioconcentration factor (BCF)	A term describing the degree to which a chemical can be concentrated in the tissues of an organism in the aquatic environment as a result of exposure to water-borne chemical. At steady state during the uptake phase of a bioconcentration test, the BCF is a value which is equal to the concentration of a chemical in one or more tissues of the exposed aquatic organisms divided by the average exposure water concentration of the chemical in the test.
Biodegradation	The transformation of a material resulting from the complex enzymatic action of microorganisms (e.g., bacteria, fungi). It usually leads to disappearance of the parent structure and to the formation of smaller chemical species, some of which are used for cell anabolism. Although typically used with reference to microbial activity, it may also refer to general metabolic breakdown of a substance by any living organism.
Biomagnification	Result of the processes of bioconcentration and bioaccumulation by which tissue concentrations of bioaccumulated chemicals increase as the chemical passes up through two or more trophic levels. The term implies an efficient transfer of chemical from food to consumer, so that residue concentrations increase systematically from one trophic level to the next.
Blepharitis	Inflammation of the eyelids

Carcinogen	A substance or physical agent that is capable of causing cancer. For the purposes of classification by the GESAMP experts they are subdivided into the following three categories: *Animal Carcinogen:* a substance that has been shown to cause cancer in laboratory animals, but for which there is no evidence that the substance can cause cancer in humans. *Human Carcinogen*: a substance for which there is documented credible evidence that the material causes cancer in humans. *Epigenetic Carcinogen*: a substance capable of causing cancer by mechanisms not involving direct interaction with genetic material.
Chemical oxygen demand (COD)	When organic materials are not easily degraded by microorganisms, strong oxidizing agents (e.g., potassium permanganate) are used to enhance oxidation. COD is thus measured instead of BOD (see BOD). COD values will be larger than BOD values.
Cholinesterase inhibitor (ChE inhibitor)	A substance which produces inhibition of the cholinesterase group of enzymes, that play a vital role in nerve impulse transmission and other biological functions. Also known as an anticholinesterase.
Chemosis	Swelling of the conjunctiva due to accumulation of tissue fluid.
Chronic toxicity	Effects resulting from repeated exposure to a material for the lifespan of the species, or the greater part thereof.
Clastogen	A substance capable of causing structural injury to chromosomes.
Conjunctoblepharitis	Inflammation of the conjunctiva and eyelids.
Convulsant	A material which causes seizures.
Corrosive	Capable of causing erosive destruction of tissues.
EC_{50}	Effective concentration 50%: The concentration of a material which produces a 50% response in the defined end-point.
Erythema	Excess of reddening of a tissue due to increased flor of blood.
Genotoxic	Capable of causing injury to the genetic component of cells.
Haematotoxic	Capable of causing injury to the blood and/or blood-forming tissues.
Immunotoxic	Capable of causing injury to the immune system and to interfere with body defence mechanisms.
Inhibition concentration (IC)	A point estimate of the chemical concentration that would cause a given percent reduction (e.g., IC_{50}) in a nonlethal biological measurement of the test organisms, such as reproduction or growth.

Irritant	Capable of causing a local inflammatory response.
Lachrymator	A material which produces an excess production of tear fluid when it comes into contact with the eye.
LC_{50}	Lethal Concentration 50%: The concentration, in air or in a solution, which causes a 50% mortality on the test species (usually for an acute exposure). It is calculated from the incidence of mortalities at various concentrations to which different groups of the test species are exposed. Since mortality will depend on the time of exposure, the LC_{50} should be cited for the specific exposure period. Also referred to as the median lethal concentration.
LD_{50}	Lethal Dose 50%. The amount (dose) of test material which causes a 50% mortality in the test species. It is calculated from the incidences of mortalities at various doses given to different groups of the test species. It is usually expressed as mg (or g) of test substance per g or kg of body weight of the test species. Also referred to as the median lethal dose.
Local toxicity	Adverse effects seen at the site where the test material comes into initial contact with the organism.
Log P_{ow}	See octanol-water partition coefficient.
Methaemoglobin generator	A substance capable of converting the oxygen carrying molecule haemoglobin) in the red blood cell to an oxidized form (methaemoglobin), which has a reduced capacity to transport oxygen.
Mutagen	A substance capable of causing molecular injury to the genetic material (DNA: deoxyribonucleic acid).
Neurotoxic	Capable of causing injury to the central nervous system (brain and spinal cord) and/or peripheral nervous system (nerves arising from the brain and spinal cord). Delayed neurotoxicity refers injury to the nervous system following a single exposure, but for which there is a significant latent period between exposure and the appearance of signs of a neurotoxic effect.
No observed effect concentration (NOEC)	The highest concentration of a material in a toxicity test that has no statistically significant adverse effect on the exposed population of test organisms compared with the controls. When derived from a life cycle or partial life cycle test, it is numerically the same as the lower limit of the MATC. Also called no observed adverse effect level (NOAEL) or no observed effect level (NOEL).
Octanol-water partition coefficient (K_{ow})	The ratio of a chemical's solubility in *n*-octanol and water at steady state; also expressed as *P*. The logarithm of *P* or K_{ow} (i.e., log *P* or K_{ow}) is used as an indication of a chemical's propensity for bioconcentration by aquatic organisms.
Oedema	Swelling of a tissue due to excess accumulation of tissue fluid

Oestromimetic	A substance which is capable of simulating the biological effects of naturally occurring oestrogenic hormones.
Ototoxic	Capable of causing injury to the inner ear and/or the auditory nerve.
Percutaneous toxicity	Systemic toxic effects produced as a result of a substance being absorbed across the skin.
Photosensitizer	A substance which is converted in the skin circulation by light into a derivative capable of causing skin sensitization.
Phototoxic	A substance which is converted in the skin circulation by light to a derivative capable of causing local irritation.
Reproductive toxicity	Capable of causing injury to the male or female reproductive system, causing an interference with propagation of the species.
Sensitization	Exposure to the substance results in stimulation of the immune system, resulting in a state of hypersensitivity to the substance. Sensitization by skin contact results in local allergic responses. Sensitization by inhalation (respiratory sensitization) causes asthma.
Sensory irritant	A material which interacts with nerves in exposed body surfaces, causing local discomfort or pain with associated reflexes. For example, on the eye a sensory irritant material will cause eye discomfort with excess tear production and blinking.
Systemic toxicity	Adverse effects produced by a substance (or conversion products) after absorption into, and circulation by, the blood stream. Systemic effects occur in tissues remote from the site where the material comes into contact with the body, and from where it is absorbed.
Tainting	Refers to a substance which is known to be taken up by marine organisms with the result that it is tainted and rendered unpalatable as seafood. Examples are chlorophenols. A taint is defined as "a foreign flavour or odour in the organisms induced by conditions in the water to which the organisms are exposed".
Testicular toxicity	Causing injury to the testis; a specific subdivision of reproductive toxicity.
Teratogen	A substance capable of causing injury to the conceptus and resulting in permanent structural and/or functional malformations.
Toxic	Capable of causing adverse effects which are detrimental to the survival or normal functioning of the individual.

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